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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,358	04/25/2001	Ghislain Dufau	2001-0479A	4966

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WENDEROTH, LIND & PONACK, L.L.P.  
2033 K STREET N. W.  
SUITE 800  
WASHINGTON, DC 20006-1021

EXAMINER

PAK, JOHN D

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 10/29/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/830,358

Applicant(s)  
Dufau et al.

Examiner  
John Pak

Art Unit  
1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jul 29, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 20-38 is/are pending in the application.
- 4a) Of the above, claim(s) 35 is/are withdrawn from consideration
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-34 and 36-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4/25/01 6) ☐ Other:

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Claims 20-38 are pending in this application.

Applicant's election with traverse of Group I, claims 20-34 and 36-38 in Paper No. 5 (7/29/02) is acknowledged. The traversal is on the ground(s) that in Group II, only copper substances are micronized. This is not found persuasive because the Group II clearly states that "other ingredients" are micronized until particle size in the suspension is less than 6  $\mu\text{m}$ . Plainly, claim 35 (Group II) recites a special technical feature that is not in common with Group I, as fully explained in Paper No. 4, pages 2-3.

The requirement is still deemed proper and is therefore made FINAL. Claim 35 is withdrawn as being directed to non-elected subject matter.

At the outset of the examination on the merits, it is noted for the record that this application is a pre PG-PUB application.

Applications that were filed prior to November 29, 2000 which have not been voluntarily published are referred to as pre PG-PUB applications. This includes international applications filed before November 29, 2000 which entered the national stage as to the U.S. on or after November 29, 2000. When examining any pre PG-PUB application, the application is subject to the former version of 35 U.S.C. 102(e) as set forth below. Former 35 U.S.C. 102. Conditions for patentability; novelty and loss of right to patent.

A person shall be entitled to a patent unless-

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

When examining any application filed prior to November 29, 2000 which has not been voluntarily published (pre PG-PUB application), for 35 U.S.C. 102(e) to apply:

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(A) The reference must be a U.S. Patent (or SIR) with a filing date earlier than the effective filing date of the application. See MPEP § 2136.03. Note that, for purposes of 35 U.S.C. 102(e), the filing date of the reference patent which has issued on an application entitled to priority from a provisional application under 35 U.S.C. 119(e) is the filing date of the provisional application, except for a patent granted on an international application (PCT) in which applicant has fulfilled the requirements of paragraphs (1), (2) and (4) of 35 U.S.C. 371. The prior art date of a patent granted on such a 35 U.S.C. 371 application is the date on which paragraphs (1), (2) and (4) of 35 U.S.C. 371 have been fulfilled; and (B) The inventive entity of the application must be different than that of the reference. Note that, where there are joint inventors, only one inventor need be different for the inventive entities to be different and a rejection under 35 U.S.C. 102(e) is applicable even if there are some common inventors.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20, 21, 25, 26, 32 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kierzkowski et al. (US 6,069,113).

Kierzkowski et al. explicitly disclose combining under heated conditions monoethanolamine + copper carbonate in water, adding triethanolamine, cooling, adding some more monoethanolamine, followed by adding tall oil fatty acid and d-limonene (column 7, lines 23-37).

While Kierzkowski et al. do not expressly disclose that their composition is a plant protection agent wherein an inorganic copper salt/oxide/hydroxide is in suspension in an aqueous

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emulsion of at least one terpenic derivative, such features are necessarily encompassed. First, because the same ingredients (e.g., copper and a terpene) are included in Kierzkowski et al., antimicrobial plant protective property would have been inevitable. Second, water and surface active agents monoethanolamine, triethanolamine and tall oil fatty acids are in sufficient quantity to comprise an emulsion. Third, while copper carbonate may complex with monoethanolamine and/or triethanolamine, such process does not preclude its suspension in the medium. An inorganic copper salt is added to arrive at the final composition, and that would appear to satisfy the claimed subject matter -- note, even applicant's claims include additives that could form copper complexes with the added copper salts/oxides/ hydroxides, such as polycarboxylates (see claim 34). Therefore, Kierzkowski et al. disclose a composition that necessarily meets every element of the claimed subject matter and the claims are anticipated. In the alternative, the claims are held obvious under the meaning of section 103(a) because the same components are disclosed, which must necessarily formulate to meet every element of the claimed invention.

Claims 20-34 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Dufau et al. (WO 98/31223), Farm Chemicals Handbook '98 and the acknowledged prior art.

Dufau et al. teach a composition comprising a mixture of 40-60 wt% alkoxylated fatty acid/ester and terpene derivative such as limonene,  $\alpha$ -pinene, terpineols, geraniol, pine oils containing 90% terpenic alcohols, tea tree oil (see from p. 1, line 30 to p. 4, line 23). The

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composition is used as adjuvants for plant protection products such as fungicides (p.1, first paragraph). The composition is taught to increase the efficacy of the plant protection treatments (p. 1, lines 21-23). Incorporation of one or more emulsifiers such as ethoxylated fatty acids is taught (p. 5, line 32 to p. 6, line 2).

Farm Chemicals Handbook '98 discloses the well known fact that many inorganic salts, oxides and hydroxide or copper are agricultural fungicides. For example, see the entries for copper (p. C100), copper ammonium carbonate, copper carbonate, basic, copper hydroxide, copper lime dust (p. C101), copper oxide, copper oxychloride (pp. C102-C103), copper oxychloride sulfate, copper sulfate (pp. C103-C104), copper sulfate, basic, copper sulfate, tribasic (p. C104).

Applicant acknowledges that copper fungicides are well known (see from p. 1, line 8 to p. 2, line 26), and formulation optimizations are known wherein copper hydroxide is micronized to reach a size as small as 0.3 to 0.4  $\mu\text{m}$  (p. 2, lines 27-36).

Dufau et al. do not explicitly disclose using inorganic copper salts/oxides/hydroxides in suspension in an aqueous emulsion of their terpenic composition. However, Dufau et al. clearly teach that their emulsifier-containing terpenic composition (emulsifier used to allow use with water, see p. 5, line 32 to p. 6, line 2) is to be used with plant protective fungicides to increase efficacy of the fungicide. Upon being taught this disclosure, one having ordinary skill in the art would have been motivated to utilize Dufau's adjuvant with copper fungicides such as those claimed herein because copper based inorganic fungicides are extremely well known for their

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excellent fungicidal activity and wide availability. As disclosed by Farm Chemicals Handbook '98, compounds of copper form one of the most useful groups of fungicides (p. C100, see entry for "Copper"). As to the actual formulation, suspension in an aqueous emulsion of Dufau's emulsifier-containing terpenic composition would have been suggested from the known suspension formulation of copper fungicides (see e.g., specification acknowledgment, p. 1, lines 33-34) and the convenience with which an aqueous-based formulation may be formulated and applied. Diameter of copper compounds not being great than 6  $\mu\text{m}$  is suggested from the known optimization of copper fungicides to such small sizes. The claimed recitation of mixture of terpenic hydrocarbons and terpenic alcohols is already met by Dufau's pine oil (see applicant's own description of pine as meeting this description on specification p. 4, lines 23-25). The claimed concentrations recited for the copper compounds, terpenic and surfactant component are not explicitly disclosed by Dufau et al., but clearly, suitable copper concentrations are well known in the art (see applicant's admission on specification p. 11, "state of the art" formulations) and the amount of surfactants and adjuvants such as Dufau's terpenic pine oil containing adjuvants would have been well within the skill of the agrochemical formulation chemist, who would have been motivated to formulate an emulsified composition with suitable proportions of components so that the fungicidal copper, surfactants (e.g. emulsifiers) and Dufau's terpene composition are contained in sufficient amounts to enhance the activity of the fungicidal copper, as taught by Dufau et al. Further motivation to arrive at the claimed concentrations would have been obtained from the guidance provided by Dufau et al. in their formulation of other active

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agents with pine oil + surfactant containing compositions (see e.g., Table I on column 5, last four examples). Such relative proportional amounts would have provided the ordinary skilled artisan with sufficient guidance and motivation to tailor relative proportions of terpenic components such as pine oil and surfactants to enhance the fungicidal activity of copper compounds.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly suggested by the teachings of the cited references and the acknowledged prior art.

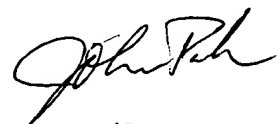
For the foregoing reasons, all claims must be refused.

A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier numbers for accessing the facsimile machines are (703) 308-4556 or (703) 305-3592.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Pak whose telephone number is (703) 308-4538. The Examiner can normally be reached on Monday through Friday from 7:30 AM to 4 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. José Dees, can be reached on (703) 308-4628.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1235.

  
JOHN PAK  
PRIMARY EXAMINER  
GROUP 1600